



## Complete Summary

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### GUIDELINE TITLE

Eating disorders among children and adolescents.

### BIBLIOGRAPHIC SOURCE(S)

Finnish Medical Society Duodecim. Eating disorders among children and adolescents. In: EBM Guidelines. Evidence-Based Medicine [Internet]. Helsinki, Finland: Wiley Interscience. John Wiley & Sons; 2007 Mar 28 [Various].

### GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Finnish Medical Society Duodecim. Eating disorders among children and adolescents. In: EBM Guidelines. Evidence-Based Medicine [Internet]. Helsinki, Finland: Wiley Interscience. John Wiley & Sons; 2005 Feb 8 [Various].

### \*\* REGULATORY ALERT \*\*

### FDA WARNING/REGULATORY ALERT

**Note from the National Guideline Clearinghouse:** This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

- [May 2, 2007, Antidepressant drugs](#): Update to the existing black box warning on the prescribing information on all antidepressant medications to include warnings about the increased risks of suicidal thinking and behavior in young adults ages 18 to 24 years old during the first one to two months of treatment.

### COMPLETE SUMMARY CONTENT

\*\* REGULATORY ALERT \*\*

SCOPE

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INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

## SCOPE

### **DISEASE/CONDITION(S)**

Eating disorders including anorexia and bulimia nervosa

### **GUIDELINE CATEGORY**

Counseling  
Diagnosis  
Evaluation  
Management  
Treatment

### **CLINICAL SPECIALTY**

Family Practice  
Nutrition  
Pediatrics  
Psychiatry  
Psychology

### **INTENDED USERS**

Health Care Providers  
Physicians  
Psychologists/Non-physician Behavioral Health Clinicians

### **GUIDELINE OBJECTIVE(S)**

Evidence-Based Medicine Guidelines collect, summarize, and update the core clinical knowledge essential in general practice. The guidelines also describe the scientific evidence underlying the given recommendations.

### **TARGET POPULATION**

Children and adolescents with known or suspected eating disorders, such as anorexia nervosa or bulimia nervosa

### **INTERVENTIONS AND PRACTICES CONSIDERED**

#### **Diagnosis/Evaluation**

1. Screening questionnaire
2. Evaluation for signs and symptoms of eating disorders

3. Laboratory tests to evaluate for anemia and low blood glucose levels (anorexia nervosa) or for hypokalaemia and increased serum amylase (bulimia nervosa)

### **Treatment/Management/Counseling**

1. Treatment of severe malnutrition in a somatic ward
2. Psychotherapy (individual and family)
3. Cognitive therapy and medication (bulimia nervosa)
4. Psychopharmaceuticals (e.g., neuroleptics and antidepressants)

**Note:** Guideline developers considered several other prevention and treatment options. For a list of these, see the "Major Recommendations" field below.

### **MAJOR OUTCOMES CONSIDERED**

- Eating disorder symptomatology
- Weight gain
- Efficacy of treatment at reducing symptoms of eating disorders and improving prognosis
- Mortality

## **METHODOLOGY**

### **METHODS USED TO COLLECT/SELECT EVIDENCE**

Hand-searches of Published Literature (Primary Sources)  
Hand-searches of Published Literature (Secondary Sources)  
Searches of Electronic Databases

### **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

The evidence reviewed was collected from the Cochrane database of systematic reviews and the Database of Abstracts of Reviews of Effectiveness (DARE). In addition, the Cochrane Library and medical journals were searched specifically for original publications.

### **NUMBER OF SOURCE DOCUMENTS**

Not stated

### **METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE**

Weighting According to a Rating Scheme (Scheme Given)

### **RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE**

#### **Levels of Evidence**

**A. Quality of Evidence: High**

Further research is very unlikely to change confidence in the estimate of effect

- Several high-quality studies with consistent results
- In special cases: one large, high-quality multi-centre trial

**B. Quality of Evidence: Moderate**

Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate.

- One high-quality study
- Several studies with some limitations

**C. Quality of Evidence: Low**

Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate.

- One or more studies with severe limitations

**D. Quality of Evidence: Very Low**

Any estimate of effect is very uncertain.

- Expert opinion
- No direct research evidence
- One or more studies with very severe limitations

**METHODS USED TO ANALYZE THE EVIDENCE**

Review of Published Meta-Analyses  
Systematic Review

**DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

Not stated

**METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Not stated

**RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS**

Not applicable

**COST ANALYSIS**

A formal cost analysis was not performed and published cost analyses were not reviewed.

## **METHOD OF GUIDELINE VALIDATION**

Peer Review

## **DESCRIPTION OF METHOD OF GUIDELINE VALIDATION**

Not stated

## **RECOMMENDATIONS**

### **MAJOR RECOMMENDATIONS**

The levels of evidence [A-D] supporting the recommendations are defined at the end of the "Major Recommendations" field.

#### **Objectives**

- Remember that eating disorders are very common among adolescent girls and especially bulimic disorders are encountered in boys as well.
- One must remember to look for signs of an eating disorder; patients seldom report it themselves.
- The diagnosis and planning of treatment are the responsibility of special personnel.

#### **Basic Rules**

- An eating disorder refers to states in which food and nourishment have an instrumental and manipulative role: food has become a way to regulate the appearance of the body.
- The spectrum of eating disorders is vast. The most common disorders are anorexia nervosa and bulimia nervosa. In addition, incomplete clinical pictures and simple binge eating have become more general.
- Recently the international trend has been to put more emphasis on early reaction to the symptoms.
- Even small children can have different kinds of eating disorders that relate to difficulties in the relationships between the child and his/her caretaker.

#### **Aetiology**

- Currently eating disorders are considered to be multifarious. Genetic and sociocultural factors and also individual dynamics all affect eating disorders.
- The typical age of onset is adolescence, when the body changes and grows.
- Anorexia nervosa typically emerges between 14 and 16 years of age or around the age of 18 years. Bulimia appears typically at the age of 19-20 years.
- Eating disorders are 10-15 times more common among girls than boys.

- Every 150th girl between the ages of 14 and 16 years suffers from anorexia nervosa.
- There is no epidemiological data on the occurrence of bulimia, but it is considered to be more common than anorexia nervosa.

### **Diagnostic Criteria for Anorexia Nervosa**

- The patient does not want to maintain his or her normal body weight.
- The patient's weight is at least 15% below that expected for age and height.
- The patient's body image is distorted.
- The patient is afraid of gaining weight.
- There is no other sickness that would explain the loss of weight.

### **Diagnostic Criteria of Bulimia Nervosa**

- Desire to be thin, phobic fear of gaining weight
- Persistent preoccupation with eating and an irresistible urge or compulsive need to eat.
- Episodes of binge eating (at least twice a week); control over eating is lost.
- After the episode of binge eating, the person attempts to eliminate the ingested food (e.g., by self-induced vomiting and by abuse of purgatives and diuretics).

### **Symptoms**

- Anorexia nervosa generally starts gradually.
- Losing weight can either be very rapid or very slow. Generally the patients continue to go to school; they go on with their hobbies and feel great about themselves. Therefore the families are usually surprised to find that their child suffers from malnutrition.
- A screening questionnaire is helpful in the assessment of patients with suspected eating disorder (each positive answer gives one point; 2 or more points suggest an eating disorder).
  1. Do you try to vomit if you feel unpleasantly satiated?
  2. Are you anxious with the thought that you cannot control the amount of food you eat?
  3. Have you lost more than 6 kg of weight during the last 3 months?
  4. Do you consider yourself obese although others say you are underweight?
  5. Does food/thinking of food dominate your life?
- Anorectic adolescents deny their symptoms, and it takes time and patience to motivate them to accept treatment.
- Somatic symptoms include:
  - Disappearance of menstruation
  - The slowing of metabolism, constipation
  - Slow pulse, low blood pressure
  - Flushed and cold limbs
  - Reduction of subcutaneous fat
- Bulimic adolescents are aware that their eating habits are not normal, but the habit causes so much guilt and shame that seeking treatment is not easy.
- Bulimia also causes physical symptoms
  - Disturbances of menstruation

- Disturbances in electrolyte and acid-alkali balances created by frequent vomiting and damage of the enamel of teeth (see the Finnish Medical Society Duodecim guideline "Dental Caries and Other Diseases of the Hard Tissues of the Teeth and Dental Pulp")

### **Laboratory Findings**

- In anorexia nervosa
  - Slight anaemia
  - Blood glucose levels on the lower border of normal
- In bulimia
  - Hypokalaemia
  - Increased serum amylase

### **Differential Diagnosis**

- Severe somatic diseases, for example, brain tumours
- Psychiatric diseases--severe depression, psychosis, use of drugs

### **Treatment**

- If the symptoms correspond to the diagnostic criteria of anorexia nervosa, the situation should be discussed with the family before treatment is arranged.
- The adolescent and his or her family should be made aware of the seriousness of the disorder.
- Sometimes it takes time to motivate the patient to participate in the treatment.
- The treatment is divided into
  - Restoring the state of nutrition
  - Psychotherapeutic treatment
- If the state of malnutrition is life threatening, the patient is first treated in a somatic ward, and thereafter the adolescent is guided into therapy if possible.
- The forms of psychotherapy vary: both individual and family therapy have brought results; in cases of bulimia cognitive therapy and medication (Lewandowski et al., 1997; Whittal, Agras, & Gould, 1999) [C] have been successful.
- With adolescents between the ages of 14 and 16 years, positive results have been obtained by treating the entire family, because the adolescent's symptoms are often connected with difficulties to "cut loose" from the family.
- With older patients, individual, supportive, and long-lasting treatment has been the best way to promote recovery.
- A prolonged state of malnutrition and insufficient outpatient care are reasons to direct a patient into forced treatment.

### **Medical Treatment**

- A specialist should start all drug treatment.
- Different psychopharmaceuticals, for example, neuroleptics and antidepressants, have been tried in the treatment of anorexia nervosa. Controlled studies have proved them indisputably useful only if the disorder is linked to clear depression.

- Most research on the medical treatment of bulimia has concentrated on antidepressants (Bacaltchuk & Hay, 2003) [**A**], particularly fluoxetine, which has been found to decrease binge eating and vomiting for about two-thirds of bulimic patients.

## **Prognosis**

- Early intervention improves prognosis.
- Eating disorders comprise a severe group of diseases that are difficult to treat. The prognosis for the near future of anorectic patients is good, but for the long term the prognosis is worse. The percentage of mortality is still 5 to 16%.
- Not enough follow-up research has been carried out on the prognosis of bulimia, but the disease is thought to last years.
- Bulimia can be associated with depression, self-destructiveness, abuse of alcohol or drugs, and other psychological problems.

## **Related Resources**

### **Cochrane Reviews**

- A combination of antidepressants and psychotherapy may be more effective than psychotherapy alone, but psychotherapy appeared to be more acceptable to subjects. There was a non-significant trend favouring single psychotherapy over single antidepressants (Bacaltchuk, Hay, & Trefiglio, 2001) [**C**].
- Antidepressants appear to be ineffective in the treatment of anorexia nervosa (Claudino et al, 2006; Walsh et al., 2006; Treasure & Schmid, 2005) [**B**].

### **Other Evidence Summaries**

- There is no evidence from controlled trials to assess whether early intervention is beneficial in anorexia nervosa (Shoemaker, 1997) [**D**].
- Evidence on inpatient versus outpatient care for eating disorders is insufficient for firm conclusions (Meads et al., 1999) [**D**].

## **Definitions:**

### **Levels of Evidence**

#### **A. Quality of Evidence: High**

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**D. Quality of Evidence: Very Low**

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- Expert opinion
- No direct research evidence
- One or more studies with very severe limitations

**CLINICAL ALGORITHM(S)**

None provided

**EVIDENCE SUPPORTING THE RECOMMENDATIONS**

**REFERENCES SUPPORTING THE RECOMMENDATIONS**

[References open in a new window](#)

**TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS**

Concise summaries of scientific evidence attached to the individual guidelines are the unique feature of the Evidence-Based Medicine Guidelines. The evidence summaries allow the clinician to judge how well-founded the treatment recommendations are. The type of supporting evidence is identified and graded for select recommendations (see the "Major Recommendations" field).

**BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS**

**POTENTIAL BENEFITS**

- Appropriate diagnosis and treatment of eating disorders among children and adolescents
- Early intervention improves prognosis.

**POTENTIAL HARMS**

Not stated

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

Getting Better  
Living with Illness

### IOM DOMAIN

Effectiveness

## IDENTIFYING INFORMATION AND AVAILABILITY

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### ADAPTATION

Not applicable: The guideline was not adapted from another source.

### DATE RELEASED

2004 Jun (revised 2007 Mar 28)

### GUIDELINE DEVELOPER(S)

Finnish Medical Society Duodecim - Professional Association

### SOURCE(S) OF FUNDING

Finnish Medical Society Duodecim

### GUIDELINE COMMITTEE

Editorial Team of EBM Guidelines

## **COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

*Primary Author:* Päivi Rantanen

## **FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

Not stated

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## **GUIDELINE AVAILABILITY**

This guideline is included in a CD-ROM titled "EBM Guidelines. Evidence-Based Medicine" available from Duodecim Medical Publications, Ltd, PO Box 713, 00101 Helsinki, Finland; e-mail: [info@ebm-guidelines.com](mailto:info@ebm-guidelines.com); Web site: [www.ebm-guidelines.com](http://www.ebm-guidelines.com).

## **AVAILABILITY OF COMPANION DOCUMENTS**

None available

## **PATIENT RESOURCES**

None available

## **NGC STATUS**

This NGC summary was completed by ECRI on August 29, 2005. This NGC summary was updated by ECRI on December 22, 2006, and December 31, 2007.

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